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BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Application Number: 10/574,653
Filing Date: April 04, 2006
Appellant(s): KULAK ET AL.

David J. Gaskey
For Appellant

This is in response to the appeal brief filed 8 December 2008 appealing from the Office action mailed 4 August 2008.

(1) Real Party in interest

A statement identifying the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments

The appellant's statement of the status of amendments contained in the brief is correct.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

5,289,902	Fujita et al	3-1994
5,368,132	Hollowell et al	11-1994

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1, 3, 5 – 9, 10, 12 – 14 and 16 - 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fujita (5,289,902, US Patent of JP-05116869) in view of Hollowell et al (5,368,132).

Re: Claims 1, 3 and 5 – 9, Fujita discloses a roller guide device (Fig. 2) for use in an elevator system, comprising:

- A base (8),
- At least one roller (10) supported by the base such that the roller is rotatable about a roller axis (11) and moveable to the base in at least one direction perpendicular to the roller axis,
- A damper (20) that has a selectively variable stiffness and dampens the relative movement of the roller, the damper comprising a fluid (22) having a selectively variable viscosity for varying the stiffness of the damper; and
- A controller (25, Fig. 3) that automatically increases the stiffness of the damper when an associated elevator car (5) experiences high amplitude, low frequency motion and decreases the stiffness of the damper when the associated car experiences low amplitude, high frequency motion (Col. 7, Lines 3 – 13 and Col. 8, Lines 53 – 60),
- An elevator car motion indicator (24) in communication with the controller and wherein the controller changes the damper stiffness responsive to a detected level of motion (Col. 4, Line 9),
- Wherein the damper fluid comprises a magneto-rheological fluid (Col. 3).

- A field generator (23) that generates a field that changes a viscosity of the magneto-rheological fluid (Col. 4, line 1),
- The controller (25) controls the field generator, and
- An indicator (24) that provides an indication of an elevator car vibration to the controller and wherein the controller controls the damper stiffness based upon an amount of vibration; however, though

Fujita reviews his controller automatically increasing and decreasing the stiffness of his damper when an associated elevator car is experiencing varying amounts of movement, Fujita is silent with respect to his controller automatically increasing the stiffness of the damper when an associated elevator car is at a landing.

Attention is directed to Hollowell et al who teach their controller (24) automatically increasing the stiffness (magnetic field) of their damper (59, electromagnetic flux, Fig.'s 3, 5 and 6) when an associated elevator car (13) is at a landing and decreasing the stiffness of their damper when their elevator car is moving (Col. 3, L. 9 – 17) for the feature of affording greater stability when passengers are embarking/disembarking the elevator car.

It would have been obvious to one of ordinary skill in the art to modify the reference of Fujita with the teaching of Hollowell et al for ergonomics and marketability.

Re: Claims 10 and 12 – 13, Fujita discloses:

- An elevator system (Fig. 1),
- a car frame (5a),
- At least one roller (10) supported for vertical movement with the frame, and rotatable movement as well as lateral movement relative to the frame,
- A selectively variable stiffness damper (20) that dampens the relative movement of the roller, the damper comprising a fluid (22) having a selectively variable viscosity for varying the stiffness of the damper;
- A controller (25, Fig. 3) that automatically increases and decreases the stiffness of the damper in response to detected amplitudes and frequencies of vibrations of said elevator car frame;

- An vibration detector (24) that provides an indication of a level of car frame vibration to the controller and wherein the controller controls the damper stiffness based upon the indication of the level of car frame vibration; and
- Wherein the damper fluid comprises a magneto-rheological fluid (Col. 3); however

Fujita is silent with respect to his controller automatically increasing the stiffness of the damper when an associated elevator car is at a landing.

Attention is directed to Hollowell et al who teach their controller (24) automatically increasing the stiffness of their damper (59) when an associated elevator car (13) is at a landing and decreasing the stiffness of their damper when their elevator car is moving (Col. 3, L. 9 – 17) for the feature of affording greater stability when passengers are embarking/disembarking the elevator car.

It would have been obvious to one of ordinary skill in the art to modify the reference of Fujita with the teaching of Hollowell et al for ergonomics and marketability.

Regarding Claims 14 and 16 - 22, the components comprising the device of Claims 10 and 12 - 13 would necessarily have to interact in order for the device to function. It would have been obvious to perform all the method steps of Claims 10 and 12 - 13 when using the device of Fujita as taught by Hollowell et al, in a usual and expected fashion, in as much as the method claims recite no limiting steps beyond using each of the components.

With respect to **Claims 20 - 21**, Fujita discloses wherein the controller receives information from a machine controller (24) regarding an extent of motion of their elevator car for which the controller increases or decreases the stiffness of the damper responsive to the information; however, Fujita is silent with respect to the execution of his controller when his elevator car is at stationary at a landing.

Attention is directed to Hollowell et al who teach their controller automatically increasing the stiffness of their damper and decreasing the stiffness of their damper when their elevator car is stationary (at a landing) and moving, respectively, for the feature of user comfort.

It would have been obvious to one of ordinary skill in the art to modify the reference of Fujita with the teaching of Hollowell et al for ergonomics and marketability.

With further respect to Claim 17, Fujita discloses a plurality of rollers and associated dampers (Fig. 1).

With further respect to Claims 19 - 22, in reference to the claim language referring to receiving information from a machine controller, intended use and other types of functional language must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. In a claim drawn to a process of making, the intended use must result in a manipulative difference as compared to the prior art. In re Casey,152 USPQ 235 (CCPA 1967); In re Otto , 136 USPQ 458, 459 (CCPA 1963).

(10) Response to Argument

Appellant's arguments are directed to the prosecution of the independent **Claims 1, 10, 14 and 18 only**, for which the appellant argues:

- A lack of *prima facie* case of obviousness exists attributable to "… misconstrue[d] teachings of the Hollowell et al reference…"; and
- The combination of the references cannot be made, yet if done "... the actual result would be… difficult to estimate ... because of the operation of the Fujita references and that of the Hollowell, et al reference are so different from each other" wherein "There is no force applying capability in the Fujita embodiment...", thereby violating MPEP 2143.01 (VI), and that "If one were to add the control strategy of the Hollowell et al reference to the device of Fujita reference, nothing would happen..."

As reviewed during the course of prosecution, the reference of Fujita discloses a device comprising the elements as claimed and capable of providing the feature of the instant invention - automatically increasing the stiffness of the damper

when the elevator car is stationary at a landing - in that the device of Fujita continuously measures vibration frequency and amplitude throughout the ***operation*** of the elevator car, whereby detected levels of high frequency, low amplitude vibration, as measured and compared to set values by a controller (comparator), results in the reduction of damping force, and the presence of low frequency, high amplitude vibration yields an increase in damping force.

The states of high frequency, low amplitude vibration and low frequency, high amplitude vibration may correlate to the elevator car in motion and at rest, respectively, whereby the latter state may be indicative of the horizontal movement and change in payload attributable to passengers embarking/disembarking the elevator car.

Again, the device of Fujita affords vibration damping utilizing the claimed elements, including an active – not passive – damper, during an entire course of travel of an elevator car - irrespective if the elevator car is in motion or at rest.

Therefore, the outstanding aspect to address is underscored as follows:

"… a controller that automatically increases the stiffness of the damper <u>when an associated elevator car is stationary at a landing</u> and decreases the stiffness of the damper when the associated elevator car is moving"

which may be interpreted from the disclosure of the Fujita reference alone.

Nevertheless, as previously responded, Hollowell reviews the prior art of damping, including devices similar to that of the reference of Fujita – guide roller with dashpot and spring – for which Hollowell teaches the use of electromagnetic guides that follow the guide rails during the course of travel of the elevator car as well as selectively directing (increased) electromagnetic force about the nose (60) of the elevator guide rails to "lock" the elevator car at a landing, as noted by the applicant, "…to hold [the elevator car] against jostling forces of passengers entering and leaving the cab", wherein the selectively directed electromagnetic force centers the guides about the

nose of the guide rails in a contact-less manner and acts to isolate/dampen the elevator car as well as to hold the elevator car at a landing.

Additionally, said “jostling forces” generate high-amplitude, low frequency vibration that the device of Fujita senses as well and for which Fujita takes corrective measures through an increase in the electrical current to an electric coil and the consequential increase in flux strength applied to a magneto-rheological fluid, in a similar, if not identical, manner to that of applicant’s disclosure.

Therefore, Hollowell teaches the concept of a controller that automatically increases a stiffness of a field of damper when an elevator car is at a landing *for the very motivation of applicant's disclosure*.

Again, Hollowell is not cited for teaching a device that can necessarily operate the device of Fujita and Fujita, in order to be combined with Hollowell, must not be capable of generating a (holding) force of Hollowell; rather, Hollowell teaches the concept of automatically increasing a resistance to lateral motion upon reaching a landing in anticipation of the forces/vibrations generated by disembarking/embarking passengers, wherein said concept can be applied to the controller of Fujita that continuously monitors and counteracts the detected vibrations incurred upon the elevator car - irrespective of the elevator car being stationary or in motion.

Therefore, applicant’s argument that to “... add the control strategy of the Hollowell et al reference to the device of Fujita reference, nothing would happen..." is missing the point of adding a control step, *if desired*, to the device of Fujita specific to an operational state of when an elevator car is at a landing, for which the damping is automatically increased – a function that Fujita, in essence, performs in his continual detection and response(s) to vibrations.

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner’s answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

/Stefan Kruer/
Examiner, Art Unit 3654
9 March 2009
/Peter M. Cuomo/
Supervisory Patent Examiner, Art Unit 3654

Conferees:

Peter M. Cuomo /pmc/

Marc Jimenez /mj/